



COLORADO
**Division of Reclamation,
Mining and Safety**
Department of Natural Resources

April 8, 2024

Phillip Courtney
Rocky Mountain Materials and Asphalt, Inc.
c/o Martin Marietta Materials, Inc.
1627 Cole Boulevard, Suite 200
Lakewood, CO 80401

Re: Red Canyon Quarry - File No. M-1985-043
Rocky Mountain Materials and Asphalt, Inc.
Surety Increase (SI-1)
Surety increase to \$718,816.00

Dear Phillip Courtney:

On April 8, 2024 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to \$718,816.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of \$83,139.00.

Surety increase to \$718,816.00 as result of the 2024 inspection update.

On April 8, 2024, the Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase, within 60 days.

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit if the amount of any increased Financial Warranty has not been provided by June 7, 2024.

| | |
|----------------------|--------------|
| Bond Held: | \$635,677.00 |
| Prior Liability: | \$635,677.00 |
| Change in Liability: | \$83,139.00 |
| Revised Liability: | \$718,816.00 |



| | |
|-----------------------------|--------|
| Prior Permit Acreage: | 675.00 |
| Change in Permit Acreage: | 0.00 |
| Revised Permit Acreage: | 675.00 |
| Prior Affected Acreage: | 110.00 |
| Change in Affected Acreage: | 0.00 |
| Revised Affected Acreage: | 110.00 |

If you have any questions, please contact me by telephone at (303) 866-3567 x 8176, or by email at Hunter.ridley@state.co.us.

Sincerely,



Hunter C. Ridley
Environmental Protection Specialist

COST SUMMARY WORK

Task description: 2024 Inspection Update

Site: Red Canyon Quarry

Permit Action: 2024 Inspection Update

Permit/Job#: M1985043

PROJECT IDENTIFICATION

Task #: 00C State: Colorado Abbreviation: None
Date: 3/6/2024 County: Fremont Filename: M043-00C
User: HR1

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

| Task | Description | Form Used | Fleet Size | Task Hours | Cost |
|--------------------------|---------------------------------------|-----------|------------|----------------|------------------|
| 01B | Replace Growth Media on Benches | TRUCK1 | 1 | 248.57 | \$92,280 |
| 02B | Replace Growth Media on Pit Floor | SCRAPER1 | 1 | 240.02 | \$228,604 |
| 03B | Reseed Quarry Benches | REVEGE | 1 | 300.00 | \$104,783 |
| 04B | Reseed Pit Floor | REVEGE | 1 | 80.00 | \$91,290 |
| 05B | Mob/demob Equipment | MOBILIZE | 1 | 15.00 | \$19,782 |
| 06B | Smooth Grade Growth Medium on Benches | DOZER | 1 | 43.44 | \$10,776 |
| 07B | Remove Scale | NA | 1 | 40.00 | \$3,000 |
| 08B | Remove Culverts | NA | 1 | 40.00 | \$2,000 |
| <u>SUBTOTALS:</u> | | | | 1007.03 | \$552,515 |

INDIRECT COSTS

OVERHEAD AND PROFIT:

| | | | |
|----------------------|--------|------------------------------------|-----------|
| Liability insurance: | 2.02 | Total = | \$11,161 |
| Performance bond: | 1.05 | Total = | \$5,801 |
| Job superintendent: | 503.51 | Total = | \$32,768 |
| Profit: | 10.00 | Total = | \$55,252 |
| | | TOTAL O & P = | \$104,982 |
| | | CONTRACT AMOUNT (direct + O & P) = | \$657,497 |

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

| | | | |
|--|-------|---------|----------|
| Financial warranty processing (legal/related costs): | \$500 | Total = | \$500 |
| Engineering work and/or contract/bid preparation: | 4.25 | Total = | \$27,944 |
| Reclamation management and/or administration: | 5.00 | | \$32,875 |

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$166,301

TOTAL BOND AMOUNT (direct + indirect) = \$718,816

TRUCK/LOADER TEAM WORKTask description: Replace Growth Media on Benches

Site: Red Canyon Quarry Permit Action: 2024 Inspection Update Permit/Job#: M1985043

PROJECT IDENTIFICATION

Task #: 01B State: Colorado Abbreviation: None
 Date: 3/6/2024 County: Fremont Filename: 01B
 User: HR1

Agency or organization name: DRMSHOURLY EQUIPMENT COSTShift basis: 1 per day

| | Equipment Description |
|---------------------------------|-----------------------|
| Truck Loader Team -Truck: | Generic 12-18 cy, 6x4 |
| -Loader: | CAT 950H high lift |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance -Motor Grader: | NA |
| -Water Truck: | NA |

Cost Breakdown:

Truck/Loader Team

Support Equipment

Maintenance Equipment

| | Truck | Loader | Load Area | Dump Area | Motor Grader | Water Truck |
|------------------------|----------------|----------|-----------------|-----------|---------------|-------------|
| %Utilization-machine: | 100 | 85 | NA | NA | NA | NA |
| Ownership cost/hour: | \$26.39 | \$49.32 | NA | NA | NA | NA |
| Operating cost/hour: | \$64.76 | \$33.83 | NA | NA | NA | NA |
| %Utilization-ripper: | NA | 0 | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | \$0.00 | NA | NA | NA | NA |
| Operator cost/hour: | \$32.54 | \$40.71 | NA | NA | NA | NA |
| Unit Subtotals: | \$123.69 | \$123.86 | NA | NA | NA | NA |
| Number of Units: | 2 | 1 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: \$371.24 | | Support: \$0.00 | | Maint: \$0.00 | |

Total work team cost/hour: \$371.24MATERIAL QUANTITIES

Initial volume: 56,467 CCY Swell factor: 1.215
 Loose volume: 68,607 LCY

Source of estimated volume: 2001/AM-01 CIRCES Worksheet
 Source of estimated swell factor: Cat Handbook
 Material Purchase Cost: \$0.00
 Total Cost: \$0.00

HOURLY PRODUCTIONTruck Capacity:Truck Payload (weight) Basis:

Material weight: 3,300 Pounds/LCY
 Description: Decomposed rock - 75% Rock, 25% Earth
 Rated Payload: 50,300 Pounds

Payload Capacity: 15.24 LCY

Truck Bed (volume) Basis:

Struck Volume: 12.00 LCY
 Heaped Volume: 18.00 LCY
 Average Volume: 15.00 LCY
 Adjusted Volume: 15.24 LCY

Final Truck Volume Based on Number of Loader Passes: 11.93 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity: 4.300 LCY (heaped)
 Bucket Fill Factor: 0.925 Loose material - 1/8" to 3/8" (90 - 95%) 0.925
 Adjusted Capacity: 3.978 LCY

Job Condition Corrections:

Site Altitude (ft.): 7200 feet

| | Truck | Loader | Source |
|-----------------|--------------|---------------|---------------|
| Altitude Adj: | 1.000 | 1.000 | (CAT HB) |
| Job Efficiency: | 0.830 | 0.830 | (CAT HB) |

Net Correction: 0.830 0.830

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.500 minutes

| Cycle Time Factors | | Factor (min.) | Source |
|-----------------------------|---|---------------|----------|
| Material: | Mixed material 0.02 | 0.020 | (Cat HB) |
| Stockpile: | Conveyor or dozer piled 10 ft. high and up 0.00 | 0.000 | (Cat HB) |
| Truck Ownership: | Common ownership of trucks and loaders -0.04 | -0.040 | (Cat HB) |
| Operation: | Constant operation -0.04 | -0.040 | (Cat HB) |
| Dump Target: | Nominal target 0.00 | 0.000 | (Cat HB) |
| Net Cycle Time Adjustment: | | -0.060 | minutes |
| Adjusted Loader Cycle Time: | | 0.440 | minutes |
| Net Load Time per Truck: | | 0.980 | minutes |

Truck Cycle Time:

Truck Exchange Time: 0.50 Minutes Adjusted for site altitude: 0.500 Minutes
 Truck Load Time: 0.980 Minutes Adjusted for site altitude: 0.980 Minutes
 Truck Maneuver and Dump Time: 0.90 Minutes Adjusted for site altitude: 0.900 Minutes

Truck Travel (Haul & Return) Time:
penetration 5.0

Road Condition: Rutted dirt, little maintenance, no water, 2" tire

Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 600.00 | 20.00 | 5.00 | 25.00 | 406 | 1.480 |

Haul Time: **1.480** minutes

Return Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 600.00 | -20.00 | 5.00 | -15.00 | 1749 | 0.446 |

Return Time: **0.446** minutesTotal Truck Cycle Time: **4.306** minutes

Loading Tool unit
 Production 483.75 LCY/Hour Adjusted for job efficiency: 401.51 LCY/Hour
 Truck Unit Production
166.27 LCY/Hour Adjusted for job efficiency: 138.00 LCY/Hour
 Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 276.00 LCY/Hour
 Adjusted single truck/loader team production: 276.00 LCY/Hour
 Adjusted multiple truck/loader team production: **276.00** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **248.57** Hours
 Unit cost: \$1.345 /LCY Total job cost: **\$92,280**

SCRAPER TEAM WORKTask description: **Replace Growth Media on Pit Floor**Site: **Red Canyon Quarry**Permit Action: 2024 Inspection
UpdatePermit/Job#: M1985043**PROJECT IDENTIFICATION**Task #: 02BState: ColoradoAbbreviation: NoneDate: 3/6/2024County: FremontFilename: 02BUser: HR1Agency or organization name: DRMS**HOURLY EQUIPMENT**COSTShift basis: 1 per day

| Equipment Description | |
|---------------------------------|----------|
| -Scraper: | Cat 623G |
| -Dozer: | NA |
| Support Equipment -Load Area: | NA |
| -Dump Area: | NA |
| Road Maintenance -Motor Grader: | NA |
| -Water Truck: | NA |

Cost Breakdown:**Scraper Work Team****Support Equipment****Maintenance Equipment**

| | Scraper | Dozer | Load Area | Dump Area | Motor Grader | Water Truck |
|------------------------|----------------|-------|-----------|-----------|--------------|-------------|
| %Utilization-machine: | 100 | NA | NA | NA | NA | NA |
| Ownership cost/hour: | \$252.73 | NA | NA | NA | NA | NA |
| Operating cost/hour: | \$192.59 | NA | NA | NA | NA | NA |
| %Utilization-ripper: | NA | NA | NA | NA | NA | NA |
| Ripper own. cost/hour: | NA | NA | NA | NA | NA | NA |
| Ripper op. cost/hour: | NA | NA | NA | NA | NA | NA |
| Operator cost/hour: | \$30.90 | NA | NA | NA | NA | NA |
| Unit Subtotals: | \$476.22 | NA | NA | NA | NA | NA |
| Number of Units: | 2 | 0 | 0 | 0 | 0 | 0 |
| Group Subtotals: | Work: \$952.44 | | Support: | \$0.00 | Maint: | \$0.00 |

Total work team cost/hour: **\$952.44****MATERIAL QUANTITIES**Initial volume: 121,000

CCY

Swell factor: 1.215Loose volume: **147,015**

LCY

Source of estimated volume: 2001 AM-01 CIRCES WorksheetSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION****Scraper Bowl (volume) Basis:**

Material weight: 3,300 lbs/LCY
 Material description: Decomposed rock - 75% Rock,
25% Earth
 Rated Payload: 55,200 pounds

Struck Volume: 18.00 LCY
 Heaped Volume: 23.00 LCY
 Average Volume: 20.50 LCY

Payload Capacity: 16.73 LCYAdjusted Capacity: 16.73 LCYCycle Time:Scraper Loading Time: 0.90 MinutesManeuver and Spread Time: 0.70 MinutesJob Condition Correction:

Site Altitude: 7200 feet

| | Scraper | Push Dozer | Source |
|-----------------|---------|------------|----------|
| Altitude Adj: | 1.000 | NA | (CAT HB) |
| Job Efficiency: | 0.830 | NA | (CAT HB) |
| Net Correction: | 0.830 | NA | |

Travel Time:Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0Haul Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 600.00 | 2.00 | 5.00 | 7.00 | 944 | 0.69 |

Haul Time: 0.69 minutesReturn Route:

| Seg # | Haul Distance (Ft) | Grade (%) | Roll. Res (%) | Total Res (%) | Velocity (fpm) | Travel Time (min) |
|-------|--------------------|-----------|---------------|---------------|----------------|-------------------|
| 1 | 600.00 | -2.00 | 5.00 | 3.00 | 2666 | 0.43 |

Return Time: 0.43 minutesTotal Scraper team cycle time: 2.72 minutesAdjusted for job conditions: 306.26 LCY/HourSelected Number of Scrapers: 2 Scraper(s)Adjusted single scraper team (unit) hourly production: 612.51 LCY/HourAdjusted multiple scraper team (fleet) hourly production: 612.51 LCY/HourUnadjusted unit production/hour: 368.98 LCY/Hour

Optimal Number of Scrapers per push dozer: _____

JOB TIME AND COSTFleet size: 1 Team(s)Total job time: 240.02 HoursUnit cost: \$1.555 /LCYTotal job cost: \$228,604

REVEGETATION WORKTask description: Reseed Quarry BenchesSite: Red Canyon QuarryPermit Action: 2024 Inspection
UpdatePermit/Job#: M1985043**PROJECT IDENTIFICATION**Task #: 03B
Date: 3/6/2024
User: HR1State: Colorado
County: FremontAbbreviation: None
Filename: 03BAgency or organization name: DRMS**FERTILIZING****Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|-------------------------------|-----------------|-------|---|-----------------|
| Ammonium nitrate, 33-0-0 | 110.00 | pound | \$0.62 | \$68.56 |
| Triple superphosphate, 0-46-0 | 90.00 | pound | \$0.89 | \$80.10 |
| | | | Total Fertilizer Materials Cost/Acre | \$148.66 |

Application

| Description | Cost /Acre |
|---|-----------------|
| Hand spread (MEANS 32 01 90.13 0100) | \$686.07 |
| Total Fertilizer Application Cost/Acre | \$686.07 |

TILLING

| Description | Cost /Acre |
|--------------------------------|---------------|
| | \$ |
| Total Tilling Cost/Acre | \$0.00 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost /Acre |
|---------------------------|--------------------------------|------------------------|------------|
| Blue Grama - Hachita | 0.60 | 9.79 | \$9.59 |
| Arizona Fescue - Redondo | 1.00 | 11.48 | \$9.25 |
| Indian Ricegrass - Native | 1.60 | 5.18 | \$10.40 |
| Little Bluestem - Native | 1.40 | 8.36 | \$18.99 |
| Sideoats Grama - Butte | 1.80 | 5.91 | \$16.20 |
| Prairie Clover, White | 1.20 | 10.17 | \$47.70 |
| | | | \$ |
| | | | |

| | | | |
|------------------------|--|--|-----------|
| Totals Seed Mix | | | \$ |
|------------------------|--|--|-----------|

Application

| Description | Cost /Acre |
|---|------------|
| | \$ |
| Total Seed Application Cost/Acre | \$ |

MULCHING and MISCELLANEOUS

Materials

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--|-----------------|------|-------------|---------------|
| | | | \$ | \$ |
| Total Mulch Materials Cost/Acre | | | | \$0.00 |

Application

| Description | Cost /Acre |
|--|---------------|
| | \$ |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|----------------------------------|-----------|--------------------------------------|---------------|------------------------|------------|
| Pine, Ponderosa | 236 | Tubling, 3 cu. in. container (MEANS) | \$1.26 | \$0.00 | \$297.36 |
| Totals Nursery Stock Cost / Acre | | | | | \$297.36 |

JOB TIME AND COST

| | | | |
|----------------------------------|------------------------------------|--------------|-------------------|
| No. of Acres: | <u>45</u> | Cost /Acre: | <u>\$1,724.83</u> |
| Estimated Failure Rate: | <u>35%</u> | Cost /Acre*: | <u>\$1,724.83</u> |
| *Selected Replanting Work Items: | <u>FERTILIZING,SEEDING,NURSERY</u> | | |
| Initial Job Cost: | <u>\$77,617.35</u> | | |
| Reseeding Job Cost: | <u>\$27,166.07</u> | | |
| Total Job Cost: | <u>\$104,783</u> | | |
| Job Hours: | <u>300.00</u> | | |

REVEGETATION WORKTask description: Reseed Pit FloorSite: Red Canyon Quarry Permit Action: 2024 Inspection UpdatePermit/Job#: M1985043PROJECT IDENTIFICATION

Task #: 04B State: Colorado Abbreviation: None
 Date: 3/6/2024 County: Fremont Filename: 04B
 User: HR1

Agency or organization name: DRMSFERTILIZING**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost / Acre |
|-------------------------------|--------------|-------|---|-----------------|
| Ammonium nitrate, 33-0-0 | 110.00 | pound | \$0.62 | \$68.56 |
| Triple superphosphate, 0-46-0 | 90.00 | pound | \$0.89 | \$80.10 |
| | | | Total Fertilizer Materials Cost/Acre | \$148.66 |

Application

| Description | Cost / Acre |
|---|-----------------|
| Hand spread (MEANS 32 01 90.13 0100) | \$686.07 |
| Total Fertilizer Application Cost/Acre | \$686.07 |

TILLING

| Description | Cost / Acre |
|--------------------------------|---------------|
| | \$ |
| Total Tilling Cost/Acre | \$0.00 |

SEEDING

| Seed Mix | Rate – PLS LBS / Acre | Seeds per SQ. FT | Cost / Acre |
|-----------------------------|-----------------------|------------------|-------------|
| Blue Grama - Hachita | 0.30 | 4.90 | \$4.79 |
| Arizona Fescue - Redondo | 0.50 | 5.74 | \$4.63 |
| Indian Ricegrass - Native | 0.80 | 2.59 | \$5.20 |
| Little Bluestem - Native | 0.70 | 4.18 | \$9.50 |
| Sideoats Grama - Butte | 0.90 | 2.95 | \$8.10 |
| Prairie Clover, White | 0.60 | 5.08 | \$23.85 |
| Sideoats Grama - Vaughn | 0.90 | 2.95 | \$7.54 |
| Western Wheatgrass - Arriba | 1.60 | 4.04 | \$10.40 |

| | | | |
|-----------------------------|-------------|--------------|-----------------|
| Vetch, American | 0.60 | 0.27 | \$59.96 |
| Needlegrass, Green - Lodorm | 1.00 | 4.16 | \$11.78 |
| Prairie Junegrass | 0.10 | 5.32 | \$2.60 |
| Winter Fat | 0.50 | 1.27 | \$10.25 |
| Yarrow, Western | 0.10 | 6.08 | \$4.18 |
| Totals Seed Mix | 8.60 | 49.53 | \$162.76 |

Application

| Description | Cost /Acre |
|---|-----------------|
| Drill Seeding (DRMS Survey Cost) | \$232.00 |
| Total Seed Application Cost/Acre | \$232.00 |

MULCHING and MISCELLANEOUS**Materials**

| Description | Units / Acre | Unit | Cost / Unit | Cost /Acre |
|--|-----------------|------|-------------|---------------|
| | | | \$ | \$ |
| Total Mulch Materials Cost/Acre | | | | \$0.00 |

Application

| Description | Cost /Acre |
|--|---------------|
| | \$ |
| Total Mulch Application Cost/Acre | \$0.00 |

NURSERY STOCK PLANTING

| Common Name | No / Acre | Type and Size | Planting Cost | Fertilizer Pellet Cost | Cost /Acre |
|---|--------------|---------------|------------------|---------------------------|---------------|
| | | | | | \$ |
| Totals Nursery Stock Cost / Acre | | | | | \$0.00 |

JOB TIME AND COST

No. of Acres: 55 Cost /Acre: \$1,229.49
 Estimated Failure Rate: 35% Cost /Acre*: \$1,229.49
 *Selected Replanting Work Items: FERTILIZING,SEEDING

Initial Job Cost: \$67,621.95
 Reseeding Job Cost: \$23,667.68
 Total Job Cost: \$91,290
 Job Hours: 80.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mob/demob Equipment**Site: **Red Canyon Quarry**Permit Action: **2024 Inspection
Update**Permit/Job#: **M1985043****PROJECT IDENTIFICATION**

Task #: **05B** State: **Colorado** Abbreviation: **None**
 Date: **3/6/2024** County: **Fremont** Filename: **05B**
 User: **HR1**

Agency or organization name: **DRMS****EQUIPMENT TRANSPORT RIG COST**

Shift basis: **1 per day**
 Cost Data Source: **CRG Data**

Truck Tractor Description: **GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED,
400 HP (2ND HALF, 2006)**Truck Trailer Description: **GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT
TRAILER (25T, 50T, AND 100T)****Cost Breakdown:**

| Available Rig Capacities | 0-25 Tons | 26-50 Tons | 51+ Tons |
|---------------------------------|------------------|-------------------|-----------------|
| Ownership Cost/Hour: | \$20.26 | \$36.04 | \$47.05 |
| Operating Cost/Hour: | \$39.51 | \$76.08 | \$82.85 |
| Operator Cost/Hour: | \$22.52 | \$22.52 | \$22.52 |
| Helper Cost/Hour: | \$0.00 | \$23.53 | \$23.53 |
| Total Unit Cost/Hour: | \$82.29 | \$158.17 | \$175.95 |

NON ROADABLE EQUIPMENT:

| Machine Description | Weight/ Unit (TONS) | Owner ship Cost/hr/ unit | Haul Rig Cost/hr/unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet | DOT Permit Cost/ fleet |
|-------------------------|---------------------------|-----------------------------|--------------------------|---------------|--------------------------------|-------------------------------|---------------------------|
| Cat D7R DS XR Series II | 32.01 | \$114.76 | \$158.17 | 1 | \$272.93 | \$158.17 | \$250.00 |
| Cat 623G | 41.35 | \$252.73 | \$158.17 | 2 | \$821.80 | \$316.34 | \$500.00 |
| CAT 950H high lift | 20.13 | \$49.32 | \$82.29 | 1 | \$131.61 | \$82.29 | \$250.00 |
| Subtotals: | | | | | \$1,226.34 | \$556.80 | \$1,000.00 |

ROADABLE EQUIPMENT:

| Machine Description | Total Cost/hr/ unit | Fleet Size | Haul Trip Cost/hr/ fleet | Return Trip Cost/hr/ fleet |
|-------------------------------------|------------------------|------------|-----------------------------|-------------------------------|
| Generic 12-18 cy, 6x4 | \$123.06 | 2 | \$246.12 | \$246.12 |
| Drill/Broadcast Seeder with Tractor | \$14.81 | 1 | \$14.81 | \$14.81 |
| Subtotals: | | | \$260.93 | \$260.93 |

EQUIPMENT HAUL DISTANCE and Time

| | | |
|--|------------|-------|
| Nearest Major City or Town within project area region: | CAÑON CITY | |
| Total one-way travel distance: | 30.00 | miles |
| Average Travel Speed: | 40.00 | mph |

| | |
|-------------------------------------|-------------|
| Total Non-Roadable Mob/Demob Cost * | \$19,390.79 |
|-------------------------------------|-------------|

 ** two round trips with haul rig:

| | |
|----------------------------------|----------|
| Total Roadable Mob/Demob Cost ** | \$391.40 |
|----------------------------------|----------|

 ** one round trip, no haul rig:

Transportation Cycle Time:

| | Non-Roadable Equipment | Roadable Equipment |
|-------------------------|------------------------|--------------------|
| Haul Time (Hours): | 0.75 | 0.75 |
| Return Time (Hours): | 0.75 | 0.75 |
| Loading Time (Hours): | 3.00 | NA |
| Unloading Time (Hours): | 3.00 | NA |
| Subtotals: | 7.50 | 1.50 |

JOB TIME AND COST

| | | |
|-----------------|-------|-------|
| Total job time: | 15.00 | Hours |
|-----------------|-------|-------|

| | |
|-----------------|----------|
| Total job cost: | \$19,782 |
|-----------------|----------|

BULLDOZER WORKTask description: **Smooth Grade Growth Medium on Benches**

Site: **Red Canyon Quarry** Permit Action: **2024 Inspection Update** Permit/Job#: **M1985043**

PROJECT IDENTIFICATION

Task #: **06B** State: **Colorado** Abbreviation: **None**
 Date: **3/6/2024** County: **Fremont** Filename: **06B**
 User: **HR1**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D7R DS XR Series II**
 Horsepower: **240**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

| | | <u>Utilization %</u> |
|------------------------|-----------------|----------------------|
| Ownership Cost/Hour: | \$114.76 | NA |
| Operating Cost/Hour: | \$91.98 | 100 |
| Ripper own. Cost/Hour: | \$0.00 | NA |
| Ripper op. Cost/Hour: | \$0.00 | 0 |
| Operator Cost/Hour: | \$41.30 | NA |

Total unit Cost/Hour: **\$248.04**
 Total Fleet Cost/Hour: **\$248.04**

MATERIAL QUANTITIES

Initial Volume: **28,000**
 Swell factor: **1.000**
 Loose volume: **28,000 LCY**

Source of estimated volume: **2001 AM-01 CIRCES Worksheet**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **100 feet**
 Unadjusted hourly production: **714.3 LCY/hr**

Materials consistency description: **Loose stockpile 1.2**

Average push gradient: **0 %**
 Average site altitude: **7,200 feet**

Material weight: **1,600 lbs/LCY**Weight description: **Top Soil****Job Condition Correction Factor**

| | | <u>Source</u> |
|-----------------------|--------------|-----------------|
| Operator Skill: | 0.750 | (AVG.) |
| Material consistency: | 1.200 | (CAT HB) |
| Dozing method: | 1.200 | (SLOT) |

| | | |
|------------------|-------|---------------|
| Visibility: | 1.000 | (AVG.) |
| Job efficiency: | 0.830 | (1 SHIFT/DAY) |
| Spoil pile: | 0.700 | (FND-MF) |
| Push gradient: | 1.000 | (CAT HB) |
| Altitude: | 1.000 | (CAT HB) |
| Material Weight: | 1.438 | (CAT HB) |
| Blade type: | 1.000 | (PAT) |

Net correction: 0.9023

Adjusted unit production: 644.51 LCY/hr

Adjusted fleet production: **644.51** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.385/LCY

Total job time: **43.44** Hours

Total job cost: **\$10,776**